U.S. Army Medical Research Institute of Infectious Diseases

U.S. Army Medical Research and Materiel Command

Overview

The U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), located at Fort Detrick, Maryland, conducts basic and applied research on biological threats resulting in medical solutions to protect military service members.

USAMRIID, an organization of the U.S. Army Medical Research and Materiel Command (USAMRMC), is the lead medical research laboratory for the U.S. Biological Defense Research Program. The Institute plays a key role as the only laboratory in the Department of Defense (DoD) equipped to safely study highly hazardous infectious agents requiring maximum containment at Biosafety Level 4.

As the center of excellence for DoD medical biological defense research, USAMRIID's challenge is to maintain its world-class scientific and technology base while being responsive to its primary customer—the warfighter.

A Critical Resource...

While USAMRIID's primary focus is on protecting military service members, its research has applications that benefit society as a whole. The Institute's unique science and technology base serves not only to address current threats to our armed forces, but is an essential element in the medical response to any future biological threats that may confront our Nation.

FOR MORE INFORMATION

Visit our web site at:
http://www.usamriid.army.mil

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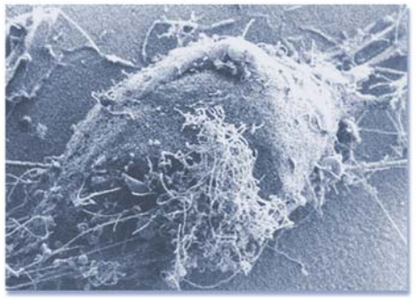
USAMRIID

Mission

To conduct basic and applied research on biological threats resulting in medical solutions to protect the warfighter.



Vision

To be the Nation's preeminent research laboratory providing cutting-edge medical research for the warfighter against biological threats.

Goals

- To ensure that research is conducted in a safe and secure environment.
- To preserve and enhance USAMRIID's ability to conduct basic and applied medical research in support of warfighter needs.
- To deliver competitive products to the advanced developer on schedule with the best value and quality.
- To promote a dynamic and intellectually stimulating environment that allows for personal and professional growth and a superior quality of life.

Medical Countermeasures

USAMRIID scientists focus on the identification and initial development of medical countermeasures to protect military personnel against biological attack. These products include candidate vaccines and drugs, diagnostic capabilities, and medical management procedures to minimize the effects of disease, preserve fighting strength, and maximize return to duty after exposure. Because there are many natural disease threats that could affect deployment of forces into endemic areas, medical countermeasures for those diseases are studied as well.

Preventive measures, such as vaccines, prophylactic drugs, and antisera given before exposure, can protect U.S. service members whose immune systems have never encountered rare or exotic diseases. In addition, these products can significantly reduce the logistical requirement for transportation of medical supplies and equipment to treat casualties in theater.

If exposure and illness do occur, rapid diagnosis is essential for proper treatment and medical management. USAMRIID scientists—often in collaboration with industry partners—develop new laboratory and field diagnostic methods for disease agents that pose a threat to U.S. armed forces.

Information is another key product of USAMRIID research. The Institute has a cadre of physicians who understand the unique diagnostic and therapeutic challenges of biological agents used in battlefield or terrorist situations. Over the past decade, USAMRIID has taken the lead in training military and civilian healthcare providers to recognize and treat biological casualties.

Regulatory Review

The research and development process is guided by a series of scientific, clinical, and regulatory reviews to ensure a product's safety and efficacy. All research at USAMRIID is performed in full compliance with federal guidelines and regulations, including those of the following agencies:

- Food and Drug Administration (FDA)
- National Institutes of Health (NIH)
- Centers for Disease Control and Prevention (CDC)
- U.S. Department of Agriculture (USDA)
- Nuclear Regulatory Commission (NRC)
- Environmental Protection Agency (EPA)
- Occupational Safety and Health Administration (OSHA)

USAMRIID strives to incorporate new methods of internal and external review to ensure that its research is scientifically excellent and focused on its assigned mission. The Institute has an outstanding safety record and consistently meets or exceeds regulatory requirements for safety and ethics in biomedical research.

Unique Facilities

USAMRIID's laboratory facilities are unique and include the following:

- 50,000 square feet of Biosafety Level 3 (BSL-3) containment laboratory space
- 10,000 square feet of Biosafety Level 4 (BSL-4) maximum containment laboratory space
- Special BSL-4 patient care suite for medical care of personnel who may have been exposed to infectious agents in a laboratory or field setting
- Animal research facilities (Biosafety Levels 2, 3, and 4), fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International
- Aerosol testing equipment and world-class expertise in the generation and characterization of biological aerosols for testing candidate vaccines and therapeutics
- Reference laboratory maintained at forensic standards, including a secured area for chain-of-custody during sample in-processing, storage, and distribution for analysis
- Clinical laboratory (BSL-2), fully accredited by the College of American Pathologists
- BSL-4 clinical laboratory

Recognized Expertise

USAMRIID's military and civilian staff of 650 includes microbiologists, physicians, veterinarians, pathologists, chemists, molecular biologists, virologists, nurses, and regulatory scientists, and the technical and administrative staff necessary to support the research. Over one-third of the USAMRIID staff has advanced degrees.

Institute scientists are internationally recognized experts in their respective fields and are frequently sought to share that expertise. They publish their research results in peer-reviewed scientific journals, present at national and international scientific meetings, hold faculty positions in their fields of study, and serve on numerous scientific committees and review boards.

In addition, USAMRIID collaborates with the CDC, the NIH, the World Health Organization (WHO), the Department of Energy (DOE), the Federal Bureau of Investigation (FBI), industry partners, and academic centers of excellence worldwide.

Support to the Field

USAMRIID maintains several rapid response teams that can deploy on short notice upon request. Some teams provide training to personnel charged with establishing diagnostic laboratories in theaters of combat operations. Other teams specialize in rapid response to investigate disease outbreaks anywhere in the world, and can evacuate patients under BSL-4 isolation.

The Institute provides subject matter expertise and available research reagents to local, state, and federal laboratories involved in developing and improving systems for disease surveillance, reporting, and diagnosis. USAMRIID also conducts collaborative field studies to map the distribution of emerging diseases or to test new diagnostic methods.

A world scientific resource, USAMRIID is a reference laboratory for and collaborates with the WHO in Geneva and the CDC in Atlanta, helping to diagnose and treat unusual diseases wherever they occur. The Institute also serves as the DoD reference laboratory for biological warfare agents and endemic infectious diseases.

Upon request, USAMRIID supports the U.S. interagency counterterrorism effort with specialized medical/scientific consultation on biological terrorism issues. The Institute lends its proven diagnostic expertise to evaluating medical and environmental samples from a wide range of customers, including public health officials, DoD medical centers, and law enforcement agencies such as the FBI. This includes laboratory support as well as specialized field support in conjunction with major national events, such as political conventions and meetings of world leaders.